

High Power Amplifier at 4 Watt P1dB Operating From 8.5 GHz to 11 GHz with 30 dB Gain, 45 dBm IP3 and SMA

SPA-110-30-04-SMA is a 4 W X-band coaxial power amplifier designed for high linearity applications in the 8.5 to 11 GHz frequency range. The amplifier offers 30 dB small signal gain with the excellent gain flatness of ± 0.75 dB and the outstanding IP3 performance of 44 dBm. High power devices utilized in the amplifier provide excellent linearity, high gain and wide dynamic range. High efficiency is achieved through using hybrid MIC design and advanced GaAs PHEMT devices. The amplifier requires a +12V DC power supply. The connectorized SMA module is unconditionally stable and includes built-in voltage regulation, bias sequencing, and reverse bias protection for added reliability. The amplifier operates over the temperature range of -30°C and +60°C.

Electrical Specifications (TA = +25°C , DC Voltage = 12Volts , DC Current = 4,500mA)

Description	Min	Typ	Max	Unit
Frequency Range	8.5		11	GHz
Small Signal Gain	30			dB
Gain Flatness		± 0.75	± 1.25	dB
P1dB	+35	+36		dBm
Output 3rd Intercept Point	+44	+45		dBm
Noise Figure		5		dB
Input VSWR		1.8:1	2:1	
Output VSWR		1.8:1	2:1	
Operating DC Voltage		12		Volts
Operating DC Current		4,500	5,000	mA
Operating Temperature Range	-30		+60	°C

Absolute Maximum Rating

Parameter	Rating	Units
Source Voltage	+15	Volts
RF input Power	+17	dBm
Operating Temperature (base-plate)	-30 to +60	°C
Storage Temperature	-55 to +85	°C



ESD Sensitive Material, Transport material in Approved ESD bags. Handle only in approved ESD Workstation.

Configuration

- Connector 1 SMA Female
- Connector 2 SMA Female



Features:

- 8.5 GHz to 11 GHz Frequency Range
- High P1dB Output Power: 36 dBm Typical
- Small Signal Gain: 30 dB min
- Gain Flatness: ± 0.75 dB
- High Output IP3: 44 dBm
- Noise Figure: 5 dB
- 50 Ohm Input and Output Matched
- -30 to +60°C Operating Temperature
- Unconditionally Stable
- Regulated Supply & Bias Sequencing
- Hermetically Sealed Module
- Overvoltage External Protection for Easy Repair

Applications:

- Telecom Infrastructure
- Test Instrumentation
- Fixed Microwave Backhaul
- Military & Space
- Radar Systems
- Communication Systems
- Microwave Radio Systems
- Satellite Communication
- Commercial Avionics
- Driver Amplifier
- High Power Output Amplifier

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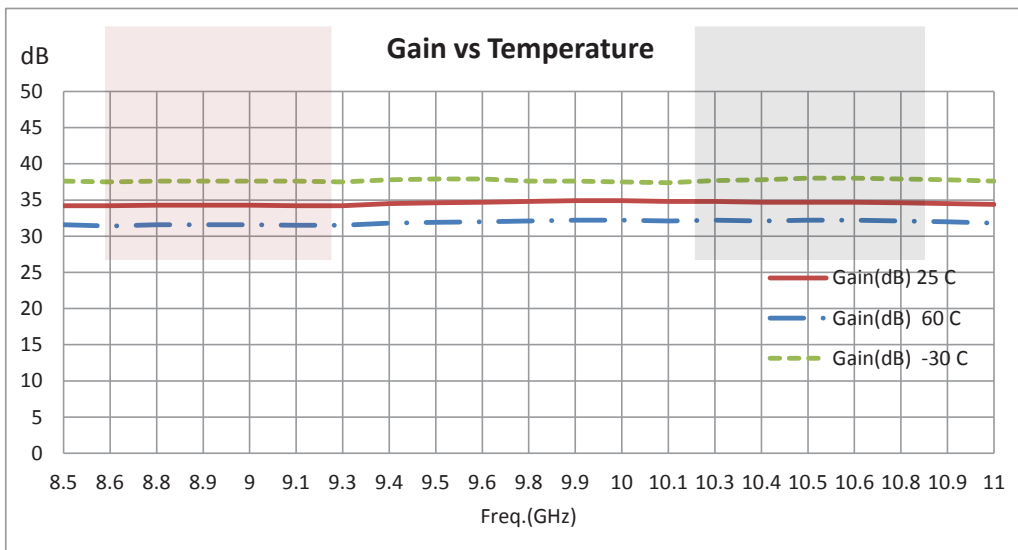
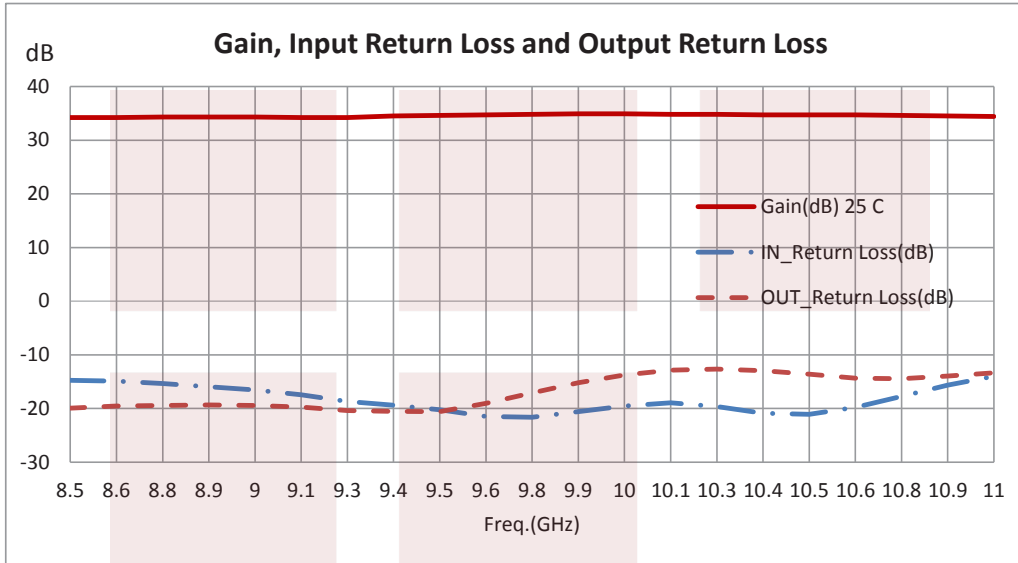
Compliance Certifications (visit www.FairviewMicrowave.com for current document)

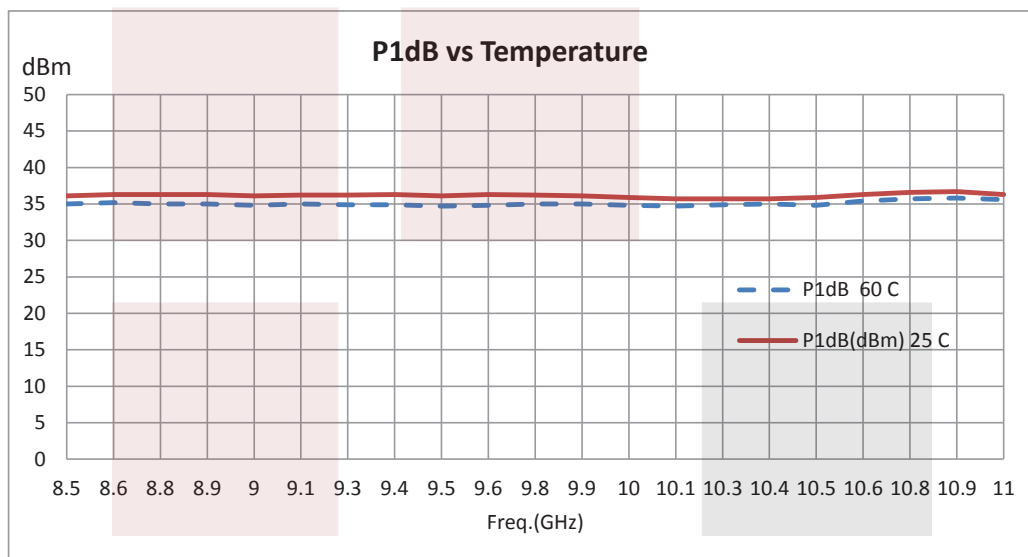
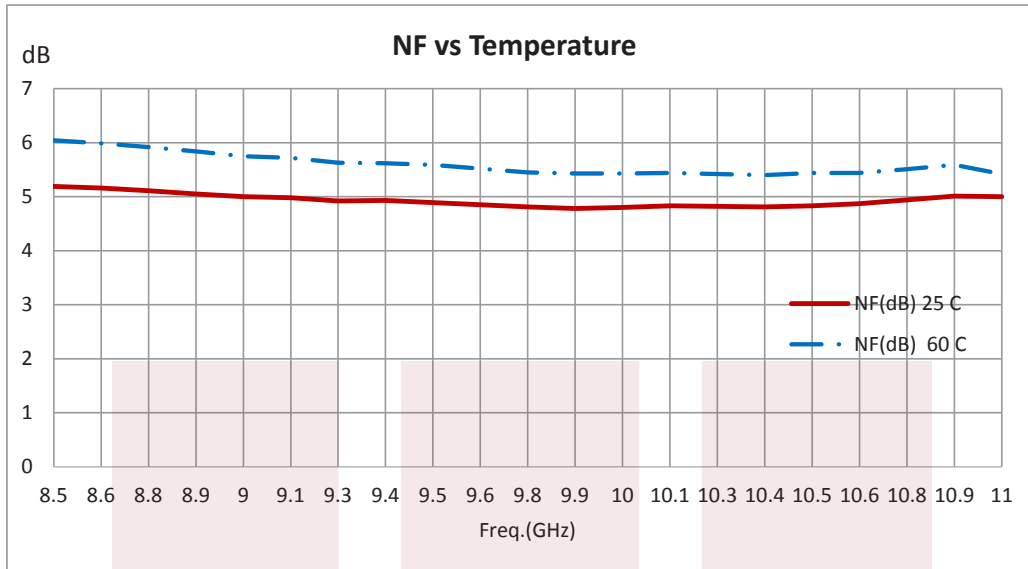
Plotted and Other Data

Notes:

- Values at 25 °C, sea level
- ESD Sensitive Material, Transport material in Approved ESD bags. Handle only in approved ESD Workstation.
- Heat Sink Required for Proper Operation, Unit is cooled by conduction to heat sink.

Power Data



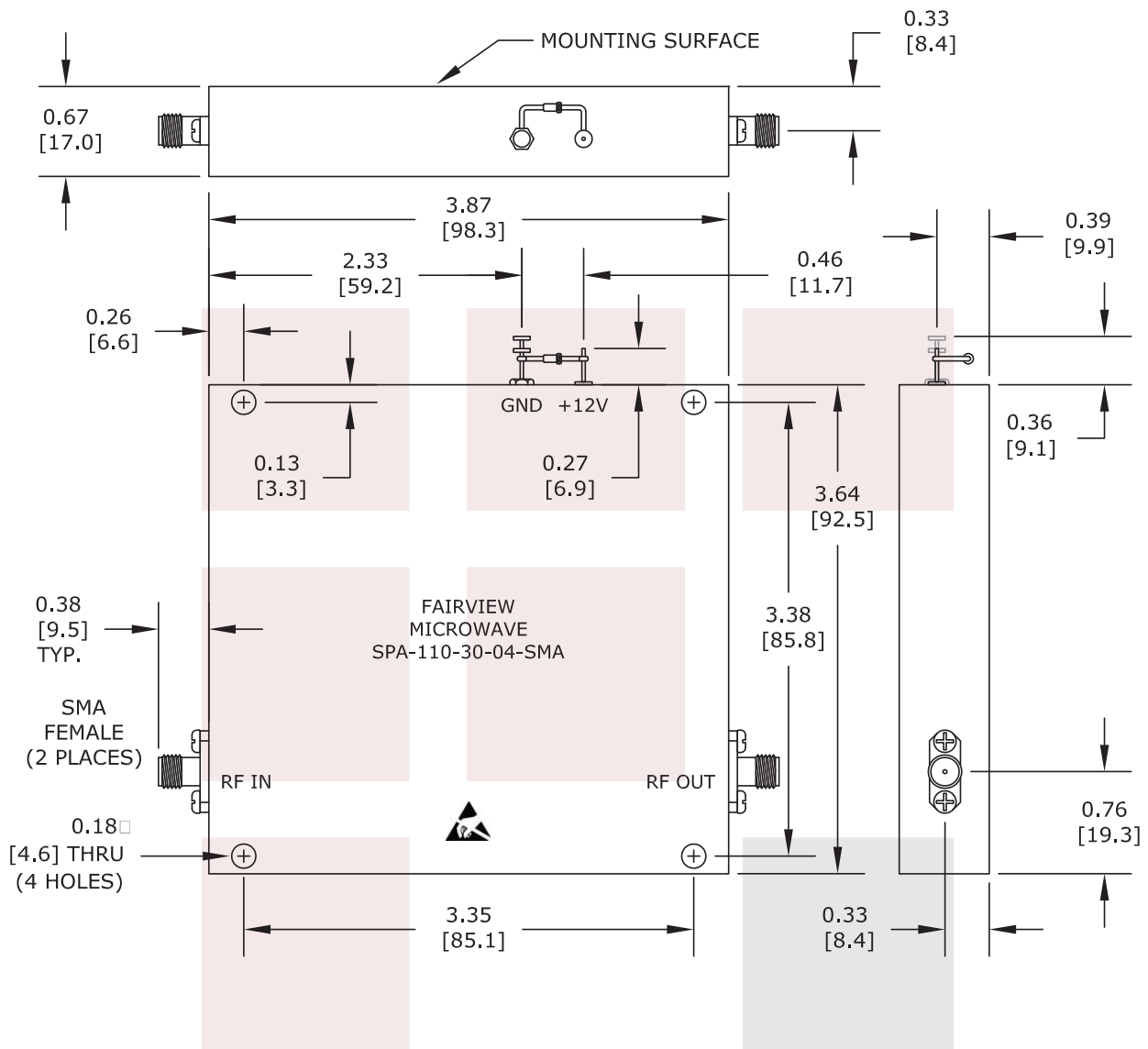


High Power Amplifier at 4 Watt P1dB Operating From 8.5 GHz to 11 GHz with 30 dB Gain, 45 dBm IP3 and SMA from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [High Power Amplifier at 4 Watt P1dB Operating From 8.5 GHz to 11 GHz with 30 dB Gain, 45 dBm IP3 and SMA SPA-110-30-04-SMA](#)

URL: <http://www.fairviewmicrowave.com/high-power-amplifier-4watt-30db-spa-110-30-04-sma-p.aspx>

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NOTE:
HEAT SINK REQUIRED FOR PROPER OPERATION,
UNIT IS COOLED BY CONDUCTING TO HEAT SINK.

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TITLE High Power Amplifier at 4 Watt P1dB Operating From 8.5 GHz to 11 GHz with 30 dB Gain, 45 dBm IP3 and SMA		DWG NO SPA-110-30-04-SMA		CAGE CODE 3FKR5	
CAD FILE	050914	SHEET	SCALE	N/A	SIZE
				A	2233